CLAIMS

1. A method of manufacturing a metallic filtration material, comprising the steps of:
   (a) forming a metallic filtration media, and
   (b) applying a protective coating to the metallic filtration media by either chemical vapour deposition or physical vapour deposition.
2. A method according to claim 1, wherein the metallic filtration media is formed from metal fibres, metal powder, metal wires, woven metal mesh or any combination thereof.
3. A method according to claim 1, further comprising the step of forming the metallic filtration material into a filter unit, by providing the filtration media with a supporting structure.
4. A method according to claim 3, wherein the filtration media is applied to part or all of the supporting structure.
5. A method according to claim 3, wherein part of all of the supporting structure is applied to the filtration media.
6. A method according to claim 3, wherein the filtration media is provided with the supporting structure after the protective coating is applied to the filtration media.
7. A method according to claim 3, wherein the filtration media is provided with the supporting structure before the protective coating is applied to the filtration media.
8. A method according to claim 3, further including a step of applying the protective coating to the supporting structure.
9. A method according to claim 3, wherein the filtration media and the supporting structure are provided with the protective coating in the same application process.
10. A metallic filtration material comprising, a metallic filtration media, which metallic filtration media comprises a protective coating applied to the metallic filtration material by either chemical vapour deposition or physical vapour deposition.

11. A metallic filtration material according to claim 10, wherein the protective coating comprises a ceramic, silica or metallic material.

12. A metallic filtration material according to claim 10, wherein the thickness of the coating is less than 0.05 of the average pore size of the filtration media.

13. A metallic filtration material according to claim 10, wherein the thickness of the coating is at least 0.00025 of the average pore size of the filtration media.

14. A metallic filtration material according to claim 10, wherein the coating is at least 50 Angstrom thick.

15. A metallic filtration material according to claim 10, wherein the coating is less than 2000 Angstrom thick.

16. A metallic filtration material according to claim 10, wherein the average thickness of the protective coating is in the range of 200-1000 Angstrom.

17. A metallic filtration material according to claim 10, wherein the metallic filtration material comprises metal fibres, metallic woven mesh, metal powder or any combination thereof.

18. A metallic filtration material according to claim 17, wherein the metallic filtration media comprises iron, nickel or cobalt, or an alloy of one or more thereof.

19. A filter unit comprising a metallic filtration media and a supporting structure, wherein the filtration media comprises a protective coating applied by either chemical vapour deposition or physical vapour deposition.

20. A filter unit according to claim 19, wherein the supporting structure comprises a surface, core, framework or any combination thereof, arranged to support the filtration media.

21. A filter unit according to claim 19, wherein the supporting structure comprises a wire mesh.

22. A filter unit according to claim 21, wherein the wire mesh is arranged either upstream or downstream of the filtration media in use.

23. A filter unit according to claim 19, wherein the supporting structure comprises a first wire mesh and a second wire mesh, one mesh located at the upstream side of the filtration media and the other mesh located at the downstream side of the filtration media in use.

24. A filter unit according to any one of claims 19, wherein the supporting structure comprises a core about which the filtration material is supported.

25. A filter unit according to any one of claims 19, wherein the supporting structure comprises one or more end cap.

26. A filter unit according to any one of claims 19, wherein part or all of the supporting structure has a protective coating.

27. A filter unit according to claim 19, wherein the whole of the filter unit has a protective coating applied thereto.